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Core Lab

Rock Compressibility System, ROCKCOM-200 Datasheet

University Training Equipment



Rock Compressibility System, ROCKCOM-200

Rock Compressibility System is designed specifically to demonstrate the reduction in pore volume that occurs within the pore space of oilfield reservoirs during pressure depletion to students. This pore reduction is the result of a change in balance between the overburden pressure (caused by weight of the overlying sediment) and the internal reservoir pressure normally estimated by hydrostatic gradient. The pressure difference between overburden and internal pore pressure is called the "Effective Overburden Pressure," or EOP.

During pressure depletion operations, the internal pressure of the reservoir drops. Since overburden pressure remains constant, the EOP is increased. The effect of increasing EOP is to reduce the bulk volume of the reservoir while the sand grains within the pore spaces expand because of the internal pressure drop. These two volume changes tend to reduce the pore space and therefore, the porosity of the rock. Although these values are small, they become important in reservoir calculations in deciding the economics of an oilfield.

Equipment includes a constant temperature air bath, overburden system, hydrostatic core holder with necessary valves and plumbing with transducers and a digital readout to monitor the internal and external pressures, high-pressure hand pump, vacuum pump, the necessary equipment to encapsulate core samples before testing, and complete operation and maintenance instructions. Specify voltage and frequency.